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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,019	12/15/2003	Gary Lynn Hanley	CGT-120	4149
24115	7590	06/02/2006	EXAMINER	
BUCKINGHAM, DOOLITTLE & BURROUGHS, LLP			OMGBA, ESSAMA	
50 S. MAIN STREET			ART UNIT	
AKRON, OH 44308			PAPER NUMBER	
			3726	

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/736,019

Applicant(s)

HANLEY, GARY LYNN

Examiner

Essama Omgba

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/15/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because in line 1, the phrase "Briefly, the present invention provides" should be deleted. Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

2. Claims 2-7, 9-17 and 19-27 are objected to because of the following informalities: in line 1 of each claim, "Process" should read --The process--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13, 17-23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce (US Patent 6,210,488) in view of Cuneo et al. (US Patent 4,020,535).

With regards to claims 1, Bruce discloses a process for removing a thermal barrier ceramic coating from a cooling hole of a metallic turbine engine component (col. 1, lines 7-16) using glass bead peening (col. 1, lines 61-63). Bruce does not disclose

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the pressure of the air jet. However it is known to remove a desired amount of coating from a substrate without affecting the substrate underneath the coating by using a dry air blast of glass beads at a pressure from about 20 to about 100psi as attested by Cuneo et al., see column 4, lines 32-40. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have removed the thermal barrier ceramic coating in the process of Bruce using a pressure of about 20-100psi for the air jet, in light of the teachings of Cuneo et al., in order to remove the desired amount of the coating without affecting the substrate surface. It should be noted that "shot peening", as one of ordinary skill in the art would know, is a treatment in which a surface is subjected to particles driven in an air jet. Applicant should also note that the size of the beads will depend on the size of the holes being treated and that the steps of drilling the cooling holes into the component using a laser drilling process and coating a surface of the cooling holes with a thermal barrier ceramic coating are old and well known in the art.

5. Claims 14-16 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruce/Cuneo et al. as applied to claims 8 and 18 above, and further in view of Farmer et al. (US Patent 6,663,919).

With regards to claims 14, 15, 24 and 25, Bruce/Cuneo et al. does not disclose the angle at which the air jet is directed at the cooling hole, however Farmer et al. teaches a jet that contains glass beads being directed in a direction generally parallel to the axis of each hole in a process of removing a thermal barrier ceramic coating, see column 5, lines 60-65 and column 6, lines 4-11 and 35-37. Therefore it would have been

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obvious to one of ordinary skill in the art at the time the invention was made, to have directed the air jet of the process of Bruce/Cuneo et al. at the cooling hole at substantially the same angle as the cooling hole, in light of the teachings of Farmer et al., in order to facilitate removal of the thermal barrier coating. Applicant should note that directing the air jet at the cooling hole toward a surface of the component opposing the surface having the thermal barrier coating is an obvious design choice as long as the thermal barrier is easily effectively removed.

For claims 16 and 26, see column 3, lines 19-25 of Farmer et al.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Essama Omgba  
Primary Examiner  
Art Unit 3726

eo  
May 26, 2006